Bandolier 23

What do we think?
What do we know?
What can we prov e?

Evidence-based health care **First published January 1996**

Bandolier in 1996

Bandolier embarks on its third year with great excitement. The pace of change is quickening, and we are looking forward to the challenges of reporting results and methods. We also look forward to continuing suggestions from readers for topics that need examination.

Bandolier availability

Back numbers of ***Bandolier***, except for the past few months, are now no more. However, we are delighted that a compendium of the first 20 issues is now available in a soft-cover book. "***Bandolier - the first 20 issues***" is available by writing to the ***Bandolier*** office, enclosing a cheque for £12.50 made out to the Anglia & Oxford RHA.

Electronic *Bandolier*

Bandolier has been available on the Internet for some months at the web address at the bottom of the page. The full texts of ***Bandolier*** 1 -21 are there, together with other ***Bandolier*** publications on:-

- Helicobacter pylori
- Latex allergy
- Full report on the 1st ***Bandolier*** conference

We are rather proud of our web pages, and intend that they will expand, not only with the texts from this and future issues of ***Bandolier***, but also with other ***Bandolier*** publications, and perhaps other useful links, as time and energy permit. If you visit the electronic ***Bandolier***, please let us have your thoughts and comments by e-mail.

Influencing technology assessment

This issue of ***Bandolier*** carries information about how ***Bandolier*** readers may influence thinking on technology evaluation in the National R&D Programme and make it a real "bottom-up" approach. It is pretty simple - all you have to do is to write 50 - 100 words about a topic that exercises ***you***, and on which ***you*** want answers.

Bandolier readers should seize this opportunity to influence thinking about everyday practical healthcare or management problems. We have printed a full page of the topics that topped the list last year - look and see how important they are to you.

The experience of ***Bandolier*** is that it is the simple questions that are most difficult to answer, and for which there is the least evidence. Go for it!

New Year Resolutions

The editorial board of ***Bandolier*** is from the Celtic fringe, and pays close attention to such pagan festivals as Halloween, Burn's Night, the Eisteddfod and welcoming in the new year

One custom associated with the new year is making new year resolutions, and in this issue of Ba***ndolier*** we suggest a set of resolutions for our readers. Be assured, however, that your ability to keep these resolutions will be determined principally by our skills as writers rather than your time or intelligence. From its very first days ***Bandolier*** had a number of objectives; these were to ensure that clinicians and decision makers without epidemiological training would understand and use epidemiological concepts and techniques - had access to the tools to make things easier or more ef fective.

For 1996

Our aim is to ensure that all decision makers - clinicians and managers - can:-

- find the best available evidence on tests and treatments
- know the criteria used to appraise trials and systematic reviews on tests and clinical and cost ef fectiveness
- define absolute and relative risk and be aware of the strengths and weaknesses of dif ferent methods of expressing results
- define, calculate and use NNT
- list screening tests that do more good than harm
- define odds ratios and know their value
- define and interpret confidence intervals and power
- distinguish sensitivity, specificity and predictive value of tests

If you can do all this, then you will be a black belt reader To help you on your way overpage are some of the most important articles about how to use the medical literature from a series in JAMA - some as Internet versions.

User guides to the medical literature from JAMA

Guyatt G, Rennie D and the Evidence Based Medicine Working Group.Why Users'Guides? EBM Working Paper Series #1.Only available on the Internet as: http://HIRU.MCMASTER.CA/ebm/0_users.htm.

Guyatt GH. Users' guides to the medical literature. JAMA 1993; 270 (17): 2096-2097.

Oxman A, Sackett, DL & Guyatt GH. Users' guides to the medical literature. I. How to get started. JAMA1993; 270 (17): 2093-2095. Also available on the Internet as: http://HIRU.MCMASTER.CA/ebm/userguid/1_intro.html.

Guyatt GH, Sackett DL and Cook DJ. Users' guides to the medical literature.II. How to use an article about therapy or prevention.A. Are the results of the study valid? JAMA 1993; 270 2598-2601.

Guyatt GH, Sackett DL and Cook DJ. Users' guides to the medical literature. II. How to use an article about therapy or prevention. B. What were the results and will they help me in caring for my patients? JAMA 1994; 271:59-63.

Jaeschke R, Guyatt G & Sackett DL. Users' guides to the medical literature. III. How to use an article about a diagnostic test. A. Are the results of the study valid? JAMA1994 February 2; 271 (5): 389-391.

Jaeschke R, Gordon H, Guyatt G & Sackett DL. Users' guides to the medical literature.III. How to use an article about a diagnostic test. B. what are the results and will they help me in caring for my patients? JAMA 1994; 271: 703-707.

Levine M, Walter S, Lee H, Haines T, Holbrook A & Moyer V. Users'guides to the medical literature. IV. How to use an article about harm. JAMA 1994 May 25; 271 (20) 1615-1619.

Laupacis A, Wells G, Richardson S & Tugwell P. Users' guides to the medical literature. V. How to use an article about prognosis. JAMA1994; 272: 234-237.

Oxman AD, Cook DJ, Guyatt GH. Users' guides to the medical literature. VI. How to use an overview JAMA 1994; 272 (17): 1367-1371.

Scott Richardson W, Detsky AS. Users' guides to the medical literature. VII. How to use a Clinical Decision Analysis. A. Are the results of the study valid? JAMA 1995; 273 (16): 1292-1295.

Scott Richardson W, Detsky AS. Users' guides to the medical literature. VII. How to use a Clinical Decision Analysis. B. What are the results and will they help me in caring for my patients? JAMA 1995; 273 (20): 1610-1613.

Hayward RSA, Wilson MC, Tunis SR, Bass EB, Guyatt G. Users' guides to the medical literature. VIII. How to use clinical practice guidelines. A. Are the recommendations valid? JAMA 1995; 274 (7): 570-574.

Wilson MC, Hayward RSA,Tunis SR, Bass EB, Guyatt G. Users' guides to the medical literature. VIII. How to use clinical practice guidelines B. What are the results and will they help me in caring for my patients? JAMA 1995; 274: 1630-1632.

Guyatt GH, Sackett DL, Sinclair JC, Hayward R, Cook DJ, Cook RJ. Users' Guides to the Medical Literature.IX. A Method for Grading Health Care Recommendations. JAMA 1995; 274 (22): 1800-1804.

How likely is it to go wrong doctor?

Patients rightly pose difficult questions, and we often wonder too. If you have never seen a horrible complication from a particular drug or intervention how likely is it to happen? A short and illuminating paper from Germany may be very helpful [1] - as the authors say "experience and Murphy's law teach us that catastrophes do happen, and their probability can in fact be calculated by a simple rule of thumb."

The authors use a 1983 paper by a Canadian statistician called Hanley as the basis of their argument - Hanley's original paper was called "If nothing goes wrong is everything alright?". Hanley's formula was that if none of 100 patients exposed had a serious problem which concerned us then we can be 95% confident that the chance of this problem occurring is at most 3 in 100 (3/n).

Eyspasch et al use the information on intraoperative death from vascular injury during laparoscopic appendectomy and cholecystectomy to develop the argument further. No such deaths have been reported in 842 appendectomies and 8192 cholecystectomies. The upper limit of the 95% confidence interval for this disaster (rule of 3) is then about 3/1000 and 3/10000 respectively.

Just because we haven't seen anything terrible happen does not mean that it will not happen.The rule of three allows us to be a little more precise about the chance of it happening.

Reference:

1 E Eyspasch, R Lefering, CK Kum, H Troidl. Probability of adverse events that have not yet occurred: a statistical reminder. British Medical Journal 1995 31 1: 619-20.

How should you choose the intervention or who to do it?

Who patients are referred to, and how we make the choice, is a complicated question. If all the doctors were equally helpful to the patients, we would like to choose the intervention on the basis of which works best, and to choose where to have it done on the basis of least risk, shortest stay etc.

Managing outcomes

Gathering evidence to substantiate these choices is a vexed topic. American 'outcome managers' compare providers of the same service using banks of administrative data, such as computerised hospital discharge abstracts. How many patients who had a hernia operation at St Faith's died compared with St Elsewhere's? The league tables in the NHS are primitive by comparison but similar interpretations are made.The obvious flaw is that if St Faith's takes all the fit patients and St Elsewhere's takes all the unhealthy ones, then St Elsewhere's performance will appear worse. The case-mix of the hospitals is different, and this confounds simple comparison.

Similar confounding was seen using this approach to decide best treatment rather than best provider. The early comparisons of transurethral prostatectomy versus open resection selected open resection for the younger, fitter men (no randomisation). This biased selection led to a conclusion that open resection had lower postoperative mortality

Non-randomised pitfalls

These pitfalls of using non-randomised data to help determine best treatment or best provider are dealt with in a paper from Toronto [1]. It looked at the impact of removing the appendix during open cholecystectomy, the impact on in-hospital fatality rate, complication rate and length of stay To do this they used a central database which keeps the records of all the Ontario general hospitals. Of the (roughly) 200,000 cholecystectomies performed between 1981 and 1990, the surgeon took out the appendix as well in 7,846 patients.

Results

The initial analysis showed a statistically significant reduction in mortality among the patients whose appendix was removed. This "paradoxical" result then evaporated with further analyses. These further analyses adjusted for confounding influences, comorbidity and non elective surgery The bottom line was that in comparisons of low-risk groups, those under 70 having elective cholecystectomy, there was a statistically significant increase in nonfatal complications.

Message

The important message is that the first analysis gave the wrong answer, that mortality was lower if the appendix was taken out. League tables which did not do further data-dredging would be misleading. The authors conclude "While no statistical adjustments can completely compensate for nonrandom case selection, routine restriction of any comparisons to low-risk subgroups also appears prudent to help determine whether persistent confounding is contributing to the apparent outcome differences between procedures or among providers".

If you want to choose the best treatment, or who does it best, in the ideal world you would do this on the basis of randomised comparisons. We are unlikely to have randomised comparisons for the "who does it best" comparison. Using audit data to help your decision may give the wrong answer. The best chance of getting the right answer would be to look at the results in the relatively fit and healthy

1 SW Wen , R Hernandez, DC Naylor. Pitfalls in nonrandomized outcomes studies. The case of incidental appendectomy with open cholecystectomy. Journal of the American MedicalAssociation 1995 274: 1687-91.

Parkinson's treatment

Time and patience are needed in assessing treatments for chronic diseases. Parkinson's disease is just one example, but here we are fortunate that randomised controlled studies begun over 10 years ago are now providing answers about what, and what not, to use.

Study

A study published in the BMJ [1] examined, inter alia, mortality in 520 patients with Parkinson's disease randomised to one of two treatments, either:

1 62.5 mg levodopa three times daily increasing to 125 mg thrice daily followed by individual titration, or

2 5 mg selegiline in the morning for a week, increased to 5 mg twice daily for three more weeks, then with levodopa as for the first group

Outcomes

These were principally mortality and differences in disability scores, with evaluations performed every three or four months for up to six years.

Results

After an average follow up of 5.6 years, 44 of 249 patients had died in treatment group 1, and 76 of 271 patients in treatment group 2; mortality was significantly higher in patients taking selegiline and levodopa.

The NNT was 9.6 (95% CI 5.7 - 31). This meant that for every 10 patients treated with selegiline and levodopa, one more would have died in 6 years than if they were treated with levodopa alone. There were no significant differences in disability scores.

1 AJ Lees. Comparison of therapeutic effects and mortality data of levodopa and levodopa combined with selegiline in patients with early mild Parkinson's disease. British Medical Journal 1995 31 1: 1602-7.

ASSESSING HEALTH TECHNOLOGIES:

WORKING FOR EFFECTIVE HEALTHCARE

Few common procedures and interventions used in the NHS have been evaluated rigorously, nor have the majority of the increasing number of new treatments and interventions. We often do not know which are the most effective or which provide best value for money, and in what circumstances.

It is understandable, therefore, that there is growing interest in the clinical and cost effectiveness of treatments and methods of care. The British NHS HealthTechnology Assessment Programme was not the first to begin to address these issues, but the UK is now acknowledged as having one of the most influential programmes. Other countries are interested in the UK approach of inviting widespread consultation with purchasers, providers and users of health services.

Health Technology Assessment (assessment of the costs, effectiveness and broader impact of any method used by health professionals to promote health, prevent, diagnose or treat disease, or improve rehabilitation and long term care) is the centrepiece of NHS R & D. Priorities for assessment are identified by the Standing Group on HealthTechnology, chaired by Professor Sir Miles Irving, Director of the Programme, with a remit to ensure a coordinated approach across the whole of health care. The Standing Group was set up by the NHS Central R&D Committee in 1993. At that time Sir Miles Irving commented: "The success of the programme depends on continual input from individual clinicians, managers and consumers to identify the most important topics for assessment and to translate research findings into practice".

1995 Priorities

Attached are the latest top priorities, agreed by the Standing Group in November 1995. These topics will be taken forward through the NHS HealthTechnology Assessment (HTA) programme. Invitations for research proposals will be advertised in the general and health press shortly. Further details of particular priority areas will be available at that time.

WHAT CAN *YOU* DO?

The SGHT is starting its review of priorities for 1996. Suggestions for consideration are invited by the SGHT's six panels (Acute Sector , Diagnostic and Imaging, Methodology Primary and Community Care, Pharmaceutical and Population Screening). Respondents are asked to identify areas of uncertainty for the NHS in terms of the effectiveness or cost-effectiveness of an intervention, rather than general development.

Suggestions should be sent in the following format to Sheila Greener, at the address given, to be received by 4 March 1996. Enquiries about the current programme of research into health technologies may be made to Sam Brown at the same address.

The results of this programme will begin to become available in 1996. The important thing then will be to ensure that the information has the widest possible audience - so that health professionals can see the evidence and patients begin to benefit, from the understanding gained.

Suggestion for research topic for consideration by the Standing Group on Health Technology Advisory Panels

Name: _____

Position: _____

Address: _____

Telephone: _____ Fax: _____ Postcode: _____

Proposed research topic: _____

_____

Reason: (50-100 words): _____

_____

_____

_____

_____

Return this form to:
Sheila Greener, R&D, NHS Executive, Quarry House, Quarry Hill, Leeds LS2 7UE
Telephone: 0113 2546186 Fax: 0113 2546174

THE SGHT's 1995 TOP PRIORITY AREAS

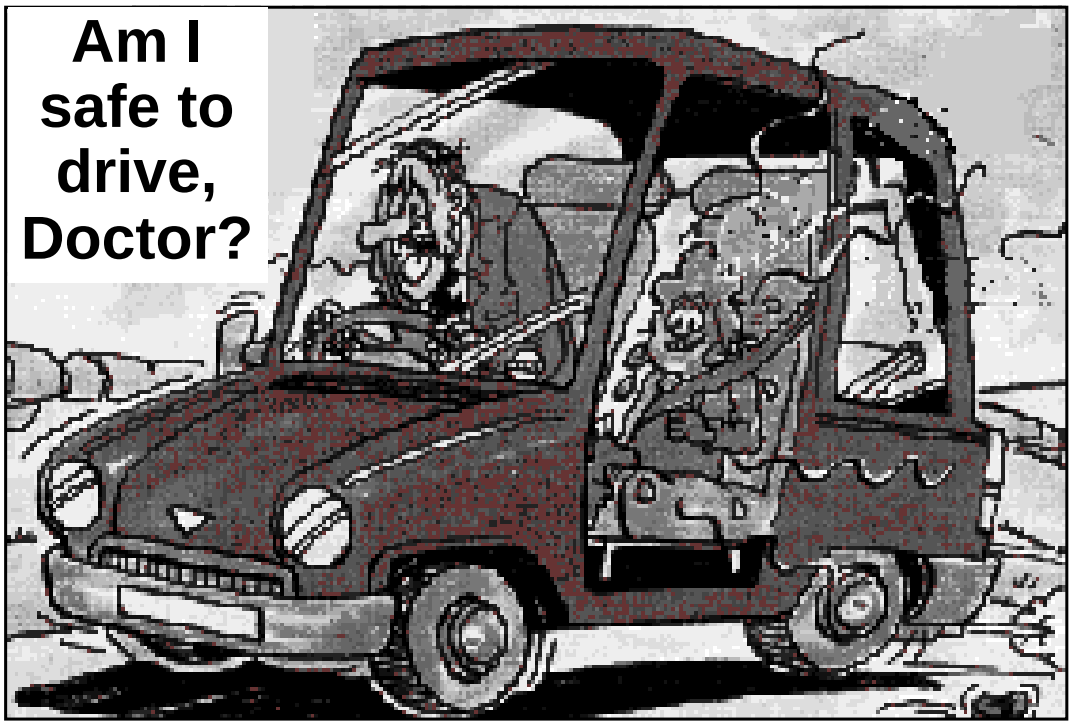
CODE	R&D AREA
95/01	Beta interferon for multiple sclerosis (evaluation and pharmacoeconomic analysis)
95/02	Stenting and other innovative methods of aortic aneurysm repair
95/03	Antimicrobial prophylaxis in surgery: comparative efficacy and co-effectiveness of different regimens in total hip replacement
95/04	Size of group randomised trials (systematic review)
95/05	Various interventions in the management of varicose veins of differing severity
95/06	Health promotion among the UK's South Asian and Afro-Caribbean communities with respect to cardiovascular disease and stroke
95/07	Targeted health visiting of high-risk families
95/08	Efficacy and cost-effectiveness of rhDNase in cystic fibrosis
95/09	Evaluating the effectiveness of discharge arrangements for the elderly
95/10	Effectiveness and cost-effectiveness of different knee prostheses with particular reference to quality of life
95/11	Treatment of established osteoporosis (extended systematic review)
95/12	Publication and other selection biases in systematic reviews (extended systematic review)
95/13	New antiepileptic drugs and existing therapies
95/14	Cross-cutting issues: uptake rates across screening programmes and ethnic/social groups (systematic review)
95/15	High-dependency units in the provision of surgical services
95/16	Image-guided minimally invasive therapy: insertion of central venous catheters under image guidance versus conventional methods
95/17	Diagnosis of endometrial abnormalities
95/18	Diagnostic tests for glaucoma
95/19	Action research: standards for judging its appropriateness
95/20	Evaluation of the use of standardised measurement of outcome in health technology assessment
95/21	Audit in health technology assessment (systematic review)
95/22	Brief psychological treatments for depression in general practice (systematic review)
95/23	Screening for congenital dislocation of the hip (systematic review)
95/24	Use of interferon alpha in the treatment of chronic hepatitis C

DRUGS & DRIVING

We make 80% of all our journeys by car . Telling someone they cannot drive is serious. Not just the patient may be affected; others in the house may rely on the patient for their transport. Recent BMJ correspondence looked at the diseases which may affect fitness to drive. Another worry is **prescribing drugs** which impair fitness. One study of deaths in road traffic accidents found tricyclic antidepressants in body fluids of 0.2% of victims, compared with alcohol (35%) or other drugs likely to affect the CNS (7.4%) [1].

Morphine and driving

Reassuring results have come from a Finnish study of driving ability in cancer patients taking long-term morphine [2]. Although morphine given as a single dose to a healthy volunteer impairs reaction time, co-ordination, attention and memory, this is not true for patients on long-term stable doses.



The authors used a battery of tests designed for professional drivers (Austrian Road Safety Board - as used for Helsinki bus drivers) to compare the performance of 24 patients on continuous morphine (mean 210 mg oral morphine daily) with that of 25 pain-free patients who took no regular analgesics. The morphine patients had been on a stable dose (twice daily sustained release formulation) for at least two weeks.

There was no significant difference between the morphine patients and the controls on the driving simulator tests. Balancing ability with eyes closed was significantly worse with morphine, finger-tapping with preferred hand was better. The conclusion was that patients on long-term stable dosing with morphine should be at no greater risk to themselves or to other road-users.

Changing the dose

How long should drivers taking morphine stay off the road after changing dose? Perhaps the best information comes from a study [3] which suggested that an increase in the dose by 30% will impair cognitive function for one week after the increase. The study indicated that at least the first 3-5 days may be "impaired". It might be safe to use this time limit in the absence of more conclusive evidence.

1 JT Everest, RJ Tunbridge, B Widdop. The incidence of drugs in road accident fatalities. Crowthorne: Transport Research Laboratory, 1989. (TRL research report 202)

2 A Vainio, J Ollila, E Matikainen, P Rosenberg, E Kalso. Driving ability in cancer patients receiving long-term morphine analgesia. Lancet 1995 346: 667-70.

3 E Bruera, K Macmillan, J Hanson, RN MacDonald. The cognitive effects of the administration of narcotic analgesics in patients with cancer pain. Pain 1989 39: 13-16.

EVIDENCE-BASED GOLF

Using "evidence-based" in the title of any healthcare article can welcome criticism, as recent Lancet editorials and letters show only too well. Since ***Bandolier*** knows how to enjoy the occasional round of golf, one of our (benign) critics challenged us to write an article on evidence-based golf!.

It was an instructive challenge. Using "golf" and "knee" as free text identifiers, MEDLINE was searched between 1991 and 1995. Three articles were identified, none of which was a randomised controlled trial. That didn't mean that they weren't interesting, however

Recommendations for resumption of various sports after knee or hip replacement by Mayo Clinic Surgeons

Recommended	Intermediate	Not recommended
Golf	Hiking	Squash
Swimming	Cross-country skiing	Ice-hockey
Cycling	Speed walking	Baseball
Sailing	Backpacking	Running
Scuba diving	Ice-skating	Water skiing
	Tennis	Karate
	Ballet	Basketball
	Aerobics	Soccer
	Alpine skiing	Rugby

To be recommended or not recommended required more than 75% of surgeons agreeing; between these scores the classification was intermediate. Some sports have been translated into their English equivalent; cricket was not mentioned. Cross-country skiing was recommended after knee but not hip replacement.

The main part of this study was a single page questionnaire which asked the surgeons whether they would recommend regular patient participation in particular sports after surgery for each of 28 sports. The results are shown in the Tables.

Golf (100%), swimming (>95%) cycling (>95%) and sailing were recommended for both; recommended sports were supported by more than 75% of responders. Arange of energetic and contact sports were not recommended by more than 75% of responders - including karate, soccer and water-skiing. Other activities, like tennis, ice-skating and aerobics had intermediate scores, and were neither recommended nor not. This paper had a literature search to identify reports on hip or knee surgical procedures and sports. In active golfers who had a knee replacement in the USA, the majority report a mild ache while playing, usually on the target side [3].

References:
1 ME Batt. A survey of golf injuries in amateur golfers. British Journal of Sports Medicine 1992 26: 63-5.
2 BJ McGrory, MJ Stuart, FH Sim. Participation in sports after hip and knee arthroplasty: review of the literature and survey of surgeon preferences. Mayo Clinic Proceedings 1995 70: 342-8.
3 WJ Mallon, JJ Callaghan. Total knee arthroplasty in active golfers. Journal of Arthroplasty 1993 8: 299-306.

Golf injuries in amateur golfers [1]

Questionnaires about golf injuries were sent to all 461 members of the Royal Worlington and Newmarket Golf Club in 1991 - including gentlemen, lady and university members. Replies were obtained from 41% of gentlemen and 47% of lady members - university members not being mentioned. The average age of responders was 50 years, who had played golf for a mean of 30 years, and who played about four rounds a month. Variation was wide!

Seventy-two injuries were sustained when playing golf by 61 golfers (of the 193 members replying). Of the golf injuries of eight women, seven involved elbow, shoulder or wrist. Men (53) had more varied injuries, the most frequent of the injuries reported being wrist (15), back (13), and then injuries to various joints and extremities. Impacts by balls (6) and clubs (1) were relatively rare, as was attack by bees (1).

Sport after hip or knee replacement

What activities are recommended for patients with a hip or knee replacement? Again no randomised controlled trials, but there is at least some collective opinion about what might be recommended or not recommended. It comes from a survey of consultant surgeons and fellows and senior residents involved in orthopaedic procedures at the Mayo Clinic [2].

Book review

Advice to authors

Lord Beaverbrook gave some punchy advice to his staff on writing book reviews (5 Feb 1957 - cited in Taylor AJP. Beaverbrook New York: Simon & Schuster; 1972, page 634).

1. Name - author - publisher
2. What the book is about. The story if possible
3. The author and his idiosyncracies
4. Is it worth reading
5. Wisecracks if good. But not any clever quips if commonplace

Never Never Never Neglect News values if any - Critics must be Reporters First.

Deadly Medicine

Moore TJ. New York: Simon & Schuster; 1995.

Deadly Medicine describes in American investigative journalese the events which led up to the registration, marketing and consequent disaster with Class 1 anti-arrhythmic drugs, particularly encainide, flecainide and mexiletine.The drugs were investigated using their ability to suppress premature ventricular contractions (PVCs). This was a 'proxy' for preventing sudden cardiac death presumed to be due to dysrhythmia. When, after drug registration and marketing, a trial was mounted to study the real outcome, mortalitythere were significantly more deaths in the treated group than in the placebo group.

The thought-provoking parts of the diatribe are the uneasy triangular relationship between academic medicine, the pharmaceutical industry and the drug regulation authorities, and the issue of using proxy outcome measures.

Eternal triangles

Taking these in turn there is nothing new in the triangular relationship, but the increasing 1990s unease about sleaze means that we have to be critical when the academics who do research funded by the industry turn up on the panel for the drug registration authorityConflict of interest becomes the understatement of the decade.

To say, as was said to ***Bandolier***, "Dear Boy, I am a consultant to 27 different companies. How can you accuse me of being in the pocket of any one company?", is not an adequate defence. One phrase in the book ***Bandolier*** had not heard before and loved, the description of professors speaking 'on behalf' of the industry at symposia as "marquee professors".

Proxy outcomes

The question of proxy outcomes, in this case the drugs' ability to suppress PVCs - thought to be the likely cause of sudden cardiac death- is vexed. The drugs did suppress PVCs. This was relatively easy to answer. To answer the more fundamental question, did the drugs reduce the incidence of sudden cardiac death, would have cost a great deal more and taken longer to do. If such trials had been done the drugs would not have been registered.

The fact that more patients died on the drugs than on placebo would have been apparent earlier. Such deaths were in fact seen in the proxy outcome trials, but, because they did not fit with the prevailing wisdom, they were ignored. Moore makes much of the fact that there was a stampede to prescribe drugs of this class, and that many people died as a result. He estimates 50,000 deaths over a two year period.

The moral has to be that there are no shortcuts, but that doing things properly takes time and money Political pressure, for instance from the AIDS or cancer lobbies, is for rapid introduction of new drugs.The downside is first that proxy outcomes may say that a drug is ef fective when it is not, and second that safety problems may be obscured by unduly hasty processes.

Again there is nothing new here, but ever since the thalidomide disaster there has been escalating concern among the public and the professionals, and a tension for the politicians, between the economic benefits for the pharmaceutical industry of introducing new drugs and the risk to the patientThe flecainide story emphasises that the concern is justifiable and the checks and balances are not perfect. The story is well told in the book, but the journalistic style may make it more difficult for the professional reader.

NNT or LBHH?

I was interested in an apparent inconsistency in the article in ***Bandolier*** 21 on the presentation of statistical information about the efects of treatment. Although you conclude that the Number-Needed-to-Treat (NNT) is becoming "the presentation of choice", you suggest earlier in the article that the 'Dear Doctor' letter about oral contraceptives would have been more useful if it had expressed the risks associated with them using the "clinically interpretable numbers 1 in 6667 and 1 in 4000".

I agree with you. The NNT is an excellent way of presenting statistical information for those who are considering policies; but I do not think it is as helpful to individual clinicians or recipients of health care as the "Likelihood of Being Helped or Harmed" (LBHH) [1]. Clearly there is scope for some more empirical research here to find out which among the substantial numbers of opinions on these matters - including that expressed above - can be supported by evidence

Iain Chalmers UK Cochrane Centre, Oxford.

1 I Chalmers. Applying overviews in meta-analysis at the bedside. Journal of Clinical Epidemiology 1995 48: 67-70.